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IBM CORPORATION
INTELLECTUAL PROPERTY LAW DEPT
PO BOX 218
YORKTOWN HEIGHTS NY 10598

DATE MAILED:
07/05/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ___*three*___ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on _____ .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-41* _____ is/are pending in the application.

    4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-41* _____ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

    a) ☐ All b) ☐ Some* c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    *See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☒ Notice of References Cited (PTO-892)

16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *3*

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other: _____

DETAILED ACTION

1.   Claims 1-41 are presented for examination.

Drawings

2.   This application has been filed with informal drawings which are acceptable for

examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 U.S.C. § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-41 are rejected under 35 U.S. C. 103 (a) as being unpatentable over Paul (US

Pat. No. 6,052,709).

As per claims 1 and 40, Paul substantially teaches a method to optimize information

retrieval based on communication relationships as claimed, comprises the steps of extracting and

integrating relationship information from multiple heterogeneous information sources (thus, if the

data in any of the field of the incoming email message match data stored in the corresponding data

category of the exclusion list manager the email is marked by the filter with a first display code

indicating the junk status of the message, which is readable as extracting and integrating

relationship information from multiple heterogeneous information sources) (see col. 6, lines 44-

50);

modifying a query based on the relationship data structure (thus, filtering may also be

based on the contents in the body of the email, the user exclusion list may automatically created

and maintained and created and modified manually by the user or service provider; which is

equivalent to modifying a query based on the relationship data structure) (see col. 6, lines 7-16).

But, explicitly Paul does not indicate the step of building and storing a relationship data structure

to represent the relationship information. However, implicitly Paul shows the step of the data in

any of these fields of the incoming email matches data stored in a corresponding field of the

inclusion list processor the incoming email is marked junk and marked with a first display code if

no match is detected the email filter labels the email message as junk by marking the message with

a second display, the email filter interacts with the email message store that processes the email

and performs other known functions for multiplicity of email addresses or accounts, the exclusion

list processor may store an exclusion list for each email address or alternatively an exclusion list

for each group of email addresses organized by domain or other group; which is readable as

building and storing a relationship data structure to represent the relationship information (see

cols. 8 and 9, lines 55-67 and 1-17). It would have been obvious to a person of ordinary skill in

the art at the time the invention was made to modify the teaching of Paul with the step of building

and storing a relationship data structure to represent the relationship information. This

modification would allow the teachings of Paul to improve the accuracy and reliability of the

optimization of system performance based on communication relationship, and provide centralized

management of account information (col. 9, lines 20-21).

As per claim 2, Paul substantially teaches a method as claimed, wherein said step of modifying a query comprises the steps of prioritizing and filtering the retrieval of related information (thus, receiving email from specific sources or email messages including certain subject matter by adding source data and subject data to the filtering application exclusion lists, which is readable as wherein said step of modifying a query comprises the steps of prioritizing and filtering the retrieval of related information) (see col. 9, lines 50-53).

As per claims 3 and 4, Paul substantially teaches a method as claimed, wherein said step of modifying a query comprises the steps of augmenting information from the heterogeneous information sources (thus, receiving email from specific sources or email messages including certain subject matter by adding source data and subject data to the filtering application exclusion lists, which is readable as the steps of augmenting information from the heterogeneous information sources) (see col. 9, lines 50-53).

As per claim 5, Paul substantially teaches a method as claimed, wherein the heterogeneous information sources are selected from the group consisting of one or more of: people-managed data sources; organization charts; mailing lists; calendar entries; personal address books; priority lists of contacts; and automated system log type information including phone logs and e-mail logs (thus, method and system for controlling delivery of unsolicited electronic mail messages one or more spam probe email addresses are created and planted at various sites on the communications network in order to insure their inclusion on large scale electronic junk mail mailing lists; which is equivalent to wherein the heterogeneous information sources are selected from the group

consisting of one or more of: people-managed data sources; organization charts; mailing lists;

calendar entries; personal address books; priority lists of contacts) (see abstract, lines 1-20).

As per claim 6, Paul substantially teaches a method as claimed, further comprises the step

of assigning different preferences to the heterogeneous information sources (thus, the filtering

system email messages marked with the first display code are further processed by the filter using

user preference data entered by the user, which is readable as assigning different preferences to

the heterogeneous information sources) (see col. 7, lines 16-33).

As per claim 7, Paul substantially teaches a method as claimed, further comprises the steps

of: said step of building a data structure further comprising the step of tracking communication

intensities between each pair of communication entities via each information source (thus, the

filter application compares the subject data of the received email message with subject preference

data entered by the user, which is readable as tracking communication intensities between each

pair of communication entities via each information source) (see col. 7, lines 21-36);

integrating the relationship information from the heterogeneous information sources, in

response to said tracking step (thus, if a match is detected the email message is marked with a

third display code and displayed to the user in a third distinctive mode using known display

techniques, which is readable as integrating the relationship information from the heterogeneous

information sources, in response to said tracking step) (see col. 7, lines 31-33).

As per claims 8 and 9, Paul substantially teaches a method as claimed, further comprises

the step of: deriving a relation-group for each communication entity based on a pre-specified

criterion on said communication intensities (thus, determine whether the subject data from the

received message contain any words or phrases matching the subject information describing each

predetermined category, which is equivalent to deriving a relation-group for each communication

entity based on a pre-specified criterion on said communication intensities) (see col. 7, lines 41-

46).

As per claims 10 and 13-14, Paul substantially teaches a method as claimed, further

comprises the step of: computing an aggregate communication intensity from an entity A to an

entity B based on a weighted sum of the communication intensities from said entity A to said

entity B via each information source (thus, the source data extracted from the alert signals are

automatically added to the stored exclusion list, processed by the control center; which is readable

as computing an aggregate communication intensity from an entity A to an entity B based on a

weighted sum of the communication intensities from said entity A to said entity B via each

information source) (see figure 4, col. 6, lines 17-25).

As per claims 11 and 32, Paul substantially teaches a method as claimed, further comprises

the steps of: assigning a weight to each information source based on a preference (see col. 6, lines

28-33);

computing the aggregate communication intensity, based on the weight and the preference

(thus, the filter application compares the subject data of the received email message with subject

preference data entered by the user, which is readable as computing the aggregate communication

intensity, based on the weight and the preference) (see col. 7, lines 15-33).

As per claim 12, Paul substantially teaches a method as claimed, further comprises the step of: deriving relation-group entities of an entity allowing one or more of an indirect relationship and an inferred relationship (see col. 4, lines 35-46).

As per claim 15, Paul substantially teaches a method as claimed, further comprises the step of: building and maintaining additional persistent data structures based on the results of the query to facilitate the response on future queries, based on the relationship data structure (see col. 4, lines 47-67).

As per claim 16, Paul substantially teaches a method as claimed, wherein the additional persistent data structure can be a personal address/phone book based on the communication intensity (see col. 4, lines 22-29).

As per claims 17 and 18, Paul substantially teaches a method as claimed, further comprising the step of determining a significance of a relationship between two entities (thus, the filtering application receives the alert signal updates stored filtering data upon receipt of the alert signal using the source data and filtering instructions retrieved from the alert signal, and filters electronic mail messages addressed to each of the user terminals in accordance with updated filtering data; which is readable as determining a significance of a relationship between two entities) (see col. 2, lines 42-47).

As per claims 19-21, Paul substantially teaches a method as claimed, wherein the tracking step can be subject based (see col. 5, lines 10-20).

As per claim 22, Paul substantially teaches a method as claimed, further comprising the step of downloading information based on the significance of the relationship (see col. 3, lines 6-9).

As per claim 23, Paul substantially teaches a method as claimed, further comprising the step of resolving name ambiguity by using the relationship from the heterogeneous information sources to determine one or more of an e-mail address, phone number, and a full name (see col. 4, lines 22-34).

As per claim 24, Paul substantially teaches a method as claimed, further comprises the step of recommending a communication channel based on a recipient characteristic (thus, processor may also extract and analyze data from other fields of the received email message including other header fields, which is readable as recommending a communication channel based on a recipient characteristic) (see col. 5, lines 10-20).

As per claim 25, Paul substantially teaches a method as claimed, further comprising the step of caching a document and information based on the significance of the relationship (thus, the source data extracted from the alert signals are automatically added to the stored exclusion list, which is readable as caching a document and information based on the significance of the relationship) (see col. 6, lines 19-21).

As per claims 26-29, Paul substantially teaches a method as claimed, further comprises the step of detecting inconsistency among data in the heterogeneous information sources (thus, the control center includes a distributor for distributing a probe address to multiple sites on the

communications network likely to be accessed by mailers of unsolicited electronic mail, which is

readable as detecting inconsistency among data in the heterogeneous information sources) (see

col. 2, lines 25-49).

As per claim 30, Paul substantially teaches a method as claimed, further comprises the

steps of: integrating the relationship information from the multiple heterogeneous sources using a

graph wherein each node represents a communication entity, and a link between a pair of nodes

represents the existence of a communication relationship between the two nodes (see figure 1,

cols. 3 and 4, lines 59-67 and 1-34).

As per claim 31, Paul substantially teaches a method as claimed, further comprises the step

of labeling each link with a communication intensity vector, where each dimension of the

communication intensity vector represents a communication intensity from an information source

(thus, the processing performed by processor may include analysis of the source header data from

the received email message in order to determine the address of the sender or address of the

servers relaying the email message from the sender to the spam probe mailbox, and alert signal

generator preferably then transmits the alert signal to each server either via an optional dedicated

communication link or via communications network; which is readable as labeling each link with a

communication intensity vector, where each dimension of the communication intensity vector

represents a communication intensity from an information source) (see col. 5, lines 10-32).

As per claim 33, Paul substantially teaches a method as claimed, further comprises the step

of obtaining relevant information from the heterogeneous information sources, said information

selected from the group consisting of one or more of: phone numbers; e-mail addresses: mailing

addresses; office location; department; or manager, from various information sources (thus,

method and system for controlling delivery of unsolicited electronic mail messages one or more

spam probe email addresses are created and planted at various sites on the communications

network in order to insure their inclusion on large scale electronic junk mail mailing lists; which is

equivalent to said information selected from the group consisting of one or more of: phone

numbers; e-mail addresses: mailing addresses; office location; department; or manager, from

various information sources) (see abstract, lines 1-20).

As per claims 34 and 36, the limitations of claims 34 and 36 are rejected in the analysis of

claims 11 above, and these claims are rejected on that basis.

As per claim 35, Paul substantially teaches a method as claimed, further comprising the

step of calculating a communication intensity based on both a number of communication events

and their temporal characteristics (thus, the filter application compares the subject data of the

received email message with subject preference data entered by the user, notably the subject data

from the received message may include subject header information the full text of the email

message or both; which is readable as calculating a communication intensity based on both a

number of communication events and their temporal characteristics) (see col. 7, lines 23-36).

As per claims 37 and 38, Paul substantially teaches a method as claimed, further comprises

the step of modifying the query to create one or more sub-queries (see col. 8, lines 37-41).

As per claim 39, Paul substantially teaches a method as claimed, further comprises the step of excluding results from the sub-queries (thus, once the information contained in the received email message is identified and received by processor, processor analyzes this information using processing methods known in the art and extracts the source header data from the received email message; which is readable as excluding results from the sub-queries) (see col. 5, lines 1-5).

As per claim 41, Paul substantially teaches a method as claimed, further comprises the step of prioritizing and filtering a list of name to e-mail address mapping to facilitate sending e-mail (thus, the filtering system controls delivery of unsolicited email messages by discarding the messages without displaying them to the user, the filtering system may also be used to filter email messages sent from the user terminals; which is readable as prioritizing and filtering a list of name to e-mail address mapping to facilitate sending e-mail) (see col. 2, lines 17-24).

4.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Breese et al. US Pat. No. 6,006,218 retrieving information as a function of a user's estimated knowledge.

Conclusion

5.   Any inquiry concerning this communication from examiner should be directed to Jean Bolte Fleurantin at (703) 308-6718. The examiner can normally be reached on Monday to Friday from 7:30 A.M. to 6.00 P.M.

If any attempt to reach the examiner by telephone is unsuccessful, the examiner's

supervisor, Mrs. KIM VU can be reached at **(703) 305-8449.** The FAX phone number is
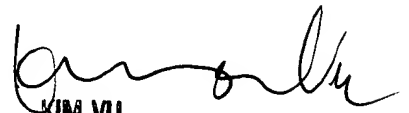
(703) 305-9731.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone is **(703) 305-9600.**

Jean Bolte Fleurantin

June 27, 2001

JBF/

KIM VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100